

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-065-2(13) Pickens
P. I. No.: 621490
S.R. 53 Widening/Reconstruction

OFFICE: Engineering Services

DATE: June 2, 2008

FROM: Brian Summers, P.E., Project Review Engineer *REW*

TO: Babs Abubakari, P.E., State Consultant Design/Program Delivery Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
ROADWAY (RD)				
RD-1	Use 14' flush median.	\$1,067,528	No	Based on the projected traffic volumes of 37,725 AADT in the Design Year, a 5 lane section is normally not used.
RD-2	Use 12' shoulders in 4-lane section	\$1,394,425	Yes	This should be done.
RD-4	Limit work on West Spring Road	\$31,058	Yes	This should be done.
RD-5	Utilize more of the R/W on Industrial Boulevard	\$493,814	Yes	This should be done.
RD-7	Delete west bound left turn lane at Bryant Street	\$313,957	No	If this were deleted, vehicles would have to travel 800' to the east of Bryant Street to make a U-turn. The traffic counts indicate there will be 80 vehicles per hour making this left turn in the Design Year.

ALT No.	Description	Savings PW & LCC	Implement	Comments
ROADWAY (RD) - continued				
RD-9	Reduce R/W at Mike Mosley tract	\$1,277,856	Yes	This should be done.
RD-14	Extend R/W to S.R. 515 to accommodate future project	\$16,500	Yes	This should be done.
RD-20	Rehabilitate in lieu of rebuilding existing roadway for one-way pairs	\$127,590	Yes	This should be done.
RD-21	Use single sidewalk on one way pair	\$210,754	No	Based on existing and proposed development, there appears to be enough pedestrian generators including a school to warrant leaving the sidewalk in on the EB and WB one way pair roadways.
RD-22	Relocate eastbound two lanes to the east adjacent to the creek	\$155,279	No	This was looked at in the field and it was determined that it would result in additional impacts to a pond on the east side of the house on the Mosley parcel.
RD-23	Relocate right turn lane at McDonald's easterly past Pickens Bank, then construct return to McDonald's and other businesses; reduce median as necessary	\$1,699,952 (proposed) \$1,128,915 (actual)	No	Based on a more detailed look at this VE Alternative, the Project Manager and Design Consultant feel that the savings shown would be minimized by any subsequent consequential damages that would have to be paid to McDonald's because their direct access to S. R 53 would be removed.

A meeting was held on May 13, 2008 to discuss the above recommendations. Daveitta Jenkins, John Moretto, and Jason Davis with CH2M Hill, Michael Haithcock and Steve Adewale with Consultant Design and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

Additional information was provided by the Project Manager on May 20, 2008, May 22, 2008 and June 2, 2008.

The results above reflect the consensus of those in attendance and those who provided input.

Approved: *Gerald M. Ross* Date: 5/31/08
Gerald M. Ross, P. E., Chief Engineer

BKS/REW

Attachments

c: Gus Shanine
Todd Long
Babs Abubakari
Stanley Hill
Steve Adewale
James Magnus
Kenny Beckworth
Katherine Russett
Patrick Allen
Lisa Myers

Rec'd 4/24/08

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: STP-065-2(13), Pickens County
SR 53 Business from SR 515/APD to
CR 243/Industrial Boulevard
PI No. 621490

OFFICE: Consultant Design
DATE: April 9, 2008

FROM: Mohammed (Babs) Abubakari, P.E., Consultant Design Program Delivery Engineer

TO: Brian Summers, P.E., Project Review Engineer
Attn: Lisa Myers

Subject: Responses to Value Engineering Study

Reference is made to the recommendations that were contained in the Value Engineering Report dated February 28, 2008 for the above referenced project. Our responses and recommendations are as follows.

Value Engineering Recommendation No. RD-1

The alternative design proposes the use of a 14' flush median in the 4-lane section.

Response:

This alternative is not recommended. Although you can realize some benefits from reduced right-of-way impacts, the projected traffic volumes of 37,725 AADT in the design year are considerably high for a 5-lane section. Therefore, a 4-lane divided 20' raised median typical section is proposed. The initial cost savings for a 14' flush median is \$1,067,528.

The design team recommends retaining the 4-lane divided 20' raised median typical section as shown. *Approval of VE Recommendation No. RD-1 is not recommended.*

Value Engineering Recommendation No. RD-2

The alternative design proposes the use of 12' urban shoulders in the 4-lane curb and gutter section of the project.

Response:

This alternate is recommended. GDOT's Design Manual notes the minimum outside shoulder width for arterials as 10' (per Table 6.3, GDOT Design Standards for Arterial Roadways). Section 6.6 of the GDOT Design Manual notes: "The current interim details for concrete sidewalk and curb cut ramps shows the section which has a 2-ft. typical, 6-ft. desirable dimension from the back of the curb to the sidewalk as the preferred section. A 16-ft. shoulder is recommended when there is sufficient space for the use of a 6-ft. grass strip." The shoulder will be reduced from 16' with a 6' grassed strip between the back of curb and sidewalk to 12' with a 2' strip with the approval of GDOT.

The design team recommends reducing the shoulder from 16' to 12' with a 2' strip. *Approval of VE Recommendation No. RD-2 is recommended.*

Value Engineering Recommendation No. RD-4

The alternative design proposes to eliminate the majority of the work on West Spring Street and simply re-construct the tie at Holly Street and the church parking lot.

Response:

The intent of the proposed concept design is not to reconstruct West Spring Street as noted in the VE Study recommendation, but to provide for milling and striping as necessary.

The intent of the design team was originally to mill and strip W. Spring Street. *Approval of VE Recommendation No. RD-4 is recommended.*

Value Engineering Recommendation No. RD-5

The alternative design proposes extending the new one way roadway an additional 350ft – 400 ft along existing Industrial Boulevard.

Response:

This alternate is recommended and was already under evaluation by the design team. This alternate will require further evaluation during preliminary design. However, there is a daycare adjacent to the intersection of Holly Street and Industrial Boulevard. Efforts will be made to utilize more of the existing Industrial Boulevard and avoid impacts to the daycare.

The design team recommends adjusting the alignment along Industrial Boulevard as much as possible, while avoiding impacts to the daycare. *Approval of VE Recommendation No. RD-5 is recommended.*

Value Engineering Recommendation No. RD-7

The alternative design proposes eliminating the left turn lane for west bound traffic at Bryant Street.

Response:

This alternate is not recommended. It can be expected that potential left turning vehicles on SR 53 Business will use the proposed median break and eyebrow located approximately 800 feet to the east of Bryant Street at the Gordon Road intersection. If the u-turn lane is deleted, traffic exiting from Summit Street to go eastbound on SR 53 Business would be required to turn right and travel approximately 1700' to a median break and then perform a u-turn to go east on SR 53 Business. At this intersection (Gordon Road @ S.R. 53 Business), the proposed design will operate as a two way stop condition, requiring any u-turning vehicles to perform the maneuver under free flow conditions for eastbound traffic.

The proposed concept currently provides a u-turn lane and eyebrow pad at the Bryant Street intersection with S.R. 53 Business. This intersection is proposed to operate with a stop and go signal without a protected u-turn signal phase. The estimated u-turn traffic for this movement (westbound S.R. 53 Business traffic making a u-turn to go eastbound on S.R. 53 Business)

will not satisfy the required warrants for a separate u-turn signal phase. However, minimal modifications to the proposed stop and go signal (to the signal head configuration and traffic phasing but not to the actual roadway footprint) would be required to create a protected u-turn phase if warranted by a change in traffic conditions. The initial cost savings of removing the west bound left-turn lane at Bryant Street is \$313,957.

Considering each of these possibilities and the cost savings of removing the u-turn lane, the design team recommends leaving the westbound u-turn lane and eyebrow in the proposed design at the intersection of S.R. 53 Business and Bryant Street. *Approval of VE Recommendation No. RD-7 is not recommended.*

Value Engineering Recommendation No. RD-9

The alternative design proposes to purchase 80 foot R/W for the proposed east bound one way in this area.

Response:

It is possible to reduce the right-of-way near the Mosley parcel. However, it may be determined that the property that remains between the Mosley parcel and the roadway is an uneconomical remnant. If determined to be an uneconomical remnant, then this portion of the property will be purchased.

The design team recommends adjusting the right-of-way near the Mosley parcel. *Approval of VE Recommendation No. RD-9 is recommended.*

Value Engineering Recommendation No. RD-14

The alternative design proposes tapering the proposed roadway to match the existing roadway, but not the right-of-way.

Response:

This alternate is recommended and the proposed right-of-way at the southeast corner of the SR 515 intersection will be modified during the preliminary plan phase.

The design team recommends adjusting the proposed right-of-way in the southeast quadrant of the SR 515 intersection. *Approval of VE Recommendation No. RD-14 is recommended.*

Value Engineering Recommendation No. RD-20

The alternative design recommends leaving the existing concrete curb and gutter in place and placing new 12.5 mm Superpave on the existing pavement with new roadway markings.

Response:

The original intent of the concept design is to mill and resurface the existing roadways in the downtown area as necessary.

Approval of VE Recommendation No. RD-20 is recommended.

Value Engineering Recommendation No. RD-21

The alternative design proposes to eliminate one side of the 5' wide sidewalk on the one ways.

Response:

This alternate is not recommended. GDOT policy is to provide sidewalk wherever curb and gutter is utilized along the outside edges of pavement of the mainline roadway and to provide pedestrian access at the intersections to meet the Americans with Disabilities Act. This alternate will only be considered if approved by GDOT. The initial cost savings for eliminating the sidewalk on one side of the one way pair is \$210,754.

The design team recommends retaining the sidewalk on both sides of the one way pair as shown. *Approval of VE Recommendation No. RD-21 is not recommended.*

Value Engineering Recommendation No. RD-22

The alternative design proposes crossing the Mike Mosley and A.W. Lawson tract at North to South approximately parallel to Town Creek.

Response:

This alternate is not recommended. A field visit was conducted to further evaluate the feasibility of shifting the eastbound one-way pair to the east side of the Mosley house. As shown on the concept layout, Town Creek runs parallel to the property line between Jasper Middle School and the Mosley parcel. During the field visit there was the discovery of a pond on the Mosley parcel on the east side of the house. Therefore, relocation of the one-way pair to the east side of the Mosley house is not recommended. The initial cost savings of relocating the eastbound 2-lane adjacent to Town Creek is \$155,279.

The design team recommends retaining the alignment in this area as shown. *Approval of VE Recommendation No. RD-22 is not recommended.*

Value Engineering Recommendation No. RD-23

The alternative design proposes to shift the proposed right turn lane into Ingles further to the east, just past the Pickens Bank site and constructing a parallel return street back to the Ingles and restaurants, thereby allowing a reduced R/W width resulting in a minimization of the impact of the new roadway to the existing users and most likely a "saving" of those properties rather than a "taking".

Response:

This alternate is not recommended. A field visit was conducted to further evaluate this alternate. The recommended alternate to relocate the right turn lane past the Pickens Bank site would introduce some driver indirection. The recommended alternate would direct drivers past the Ingles and McDonalds to a new driveway entrance. During the field visit other options were considered to reduce impacts to the McDonalds and Pizza Hut frontage. Another option that can be further investigated during preliminary design is to shift the Ingles driveway entrance to the east of the existing driveway location and begin the right turn lane just past the McDonalds. However, there appears to be an existing detention basin adjacent to the existing Ingles driveway entrance. This option would require further investigation during preliminary design of the drainage, geotechnical investigation, etc. The initial cost savings of relocating the right turn lane at McDonalds is \$1,699,952.

The design team does not recommend the alternative VE recommendation, but suggests further investigation of options during preliminary design. *Approval of VE Recommendation No. RD-23 is not recommended.*

Wishon, Ron

From: Adewale, Steve (Adesoji)
Sent: Monday, June 02, 2008 8:04 AM
To: Wishon, Ron
Cc: Myers, Lisa
Subject: RE: VE Recommendation RD-23: P.I.# 621490
Attachments: Revised Estimate of Cost-RD 23-Ver2.doc

As mentioned to you last week, attached, please find a copy of the revised cost break down showing the totals of the pavement quantities and the ROW cost for your use. These should be good enough to substantiate the points raised in RD-23.

Thanks,
Steve

From: Wishon, Ron
Sent: Friday, May 23, 2008 9:42 AM
To: Adewale, Steve (Adesoji)
Cc: Myers, Lisa
Subject: RE: VE Recommendation RD-23: P.I.# 621490

Steve;
I will wait until we get the final R/W cost before I send to the Chief Engineer. Do you know when that will be provided? By the way, the mistake in paving quantities means that the VE Alternative saves even more money since they had too much paving quantities set up for the proposed. The R/W savings is the major cost savings on this VE Alternative.

Ron

From: Adewale, Steve (Adesoji)
Sent: Thursday, May 22, 2008 6:57 AM
To: Wishon, Ron
Subject: VE Recommendation RD-23: P.I.# 621490

Please find below the additional information in response to VE recommendation RD-23. The RW Agent is reviewing the damages to the McDonald's and pizza restaurant, but will not have a response with the dollar value until next week. However, I wanted to provide you with the additional information so that you can see the response. I have asked the RW Agent to provide the value as soon as possible.

RD-23 Relocate right turn lane at McDonald's easterly past the Pickens Bank site

After further review of the cost savings identified by the VE Study Team, we have determined that the calculation for their pavement quantities based on the length and width of the alternate roadway shown in the report and their cost savings noted for the right-of-way impacts are inaccurate. The VE Study Team failed to convert the square feet to square yards. Therefore the quantity shown for all of their pavement quantities is incorrect. We have estimated that the roadway estimate for the VE recommendation is approximately \$54,000 instead of the \$430,023 shown in their report.

Also, the VE Study Team disregarded all of the consequential damages that were noted for the McDonald's and pizza restaurant with their proposed relocation of the right-turn lane past the Pickens County Bank site. However, the assumption that there will not be consequential damages due to these businesses is incorrect. There will still be damages due to these businesses if the right turn lane is moved to the driveway past the Pickens Bank site and direct access to SR 53 is removed from the McDonald's and pizza restaurants. The Right-of-Way Agent is currently evaluating and will be

able to provide an estimated dollar value associated with these two parcels assuming the relocation of the right turn lane during the week of May 26, 2008.

CH2M HILL has evaluated the roadway costs associated with the option to shift the Ingles driveway entrance to the east of the existing driveway location and begin the right turn lane just past the McDonald's. The roadway costs for this option are approximately \$70,000, including some associated excavation. As noted in the Responses to Value Engineering Study dated April 9, 2008, this option would require further investigation during the preliminary design to evaluate the drainage, geotechnical, etc. There would be additional costs that would have to be incurred for the geotechnical portion.

The design team does not recommend the alternative VE recommendation, but would suggest further investigation during the preliminary design phase once Notice to Proceed is received. Once the geometry can be evaluated more extensively, other options such as a slight shift in the alignment towards the cemetery with a wall to stay off of the property may be an option. If the slight shift in alignment will allow us to reduce the impacts at the McDonald's and pizza restaurant it may be possible to save some of the parking in front of the restaurants with the use of walls. This will have to be evaluated after the preliminary design is underway. Another option would be to also consider reduction of the median width in the area of the McDonald's and pizza restaurant.

If you need any additional information, please call me at 404-463-0291.

Thanks,
Steve

Help GDOT serve you better. Visit <http://www.howmyservice.dot.ga.gov> and rate the service you received from Team GDOT

STP-065-2(13), PI No. 621490

SR 53 BU from SR 515 to CR 243 in Pickens County

Revised Estimate of Cost Based on VE Alternative RD-23

Original RW Cost Adjusted to Remove 40% Inflation Factor

Pizza Hut	\$303,729
McDonald's	\$309,743
Sub-total	\$613,472
Scheduling Contingency (55%)	\$337,409
Sub-total	\$950,881
Admin/Court Cost (60%)	\$570,529
Total Estimated RW Cost	\$1,521,411

Proposed Cost Estimate Based on Corrections to Information in VE Report

Pizza Hut	\$65,800
McDonald's	\$70,690
Sub-total	\$136,490
Scheduling Contingency (55%)	\$75,069.50
Sub-total	\$211,559.50
Admin/Court Cost (60%)	\$126,935.70
Total Estimated RW Cost	\$338,495

GAB	\$19	427 tons	\$8113
12.5 mm	\$70	121 tons	\$8470
19.0 mm	\$104	161 tons	\$16,744
25 mm	\$64	323 tons	\$20,672
		Estimated Road Cost	\$54,000 (rounded)

RW & Road Cost Combined	\$392,495
10% Mark-Up	\$39,250

Total	\$431,745
--------------	------------------

Estimated Cost Savings (Original Est. RW Cost - Corrected VE Estimate)	$\$1,521,411 - \$431,745 =$ ██████████
--	--

Wishon, Ron

From: Adewale, Steve (Adesoji)
Sent: Thursday, May 22, 2008 6:57 AM
To: Wishon, Ron
Subject: VE Recommendation RD-23: P.I.# 621490

Please find below the additional information in response to VE recommendation RD-23. The RW Agent is reviewing the damages to the McDonald's and pizza restaurant, but will not have a response with the dollar value until next week. However, I wanted to provide you with the additional information so that you can see the response. I have asked the RW Agent to provide the value as soon as possible.

RD-23 Relocate right turn lane at McDonald's easterly past the Pickens Bank site

After further review of the cost savings identified by the VE Study Team, we have determined that the calculation for their pavement quantities based on the length and width of the alternate roadway shown in the report and their cost savings noted for the right-of-way impacts are inaccurate. The VE Study Team failed to convert the square feet to square yards. Therefore the quantity shown for all of their pavement quantities is incorrect. We have estimated that the roadway estimate for the VE recommendation is approximately \$54,000 instead of the \$430,023 shown in their report.

Also, the VE Study Team disregarded all of the consequential damages that were noted for the McDonald's and pizza restaurant with their proposed relocation of the right-turn lane past the Pickens County Bank site. However, the assumption that there will not be consequential damages due to these businesses is incorrect. There will still be damages due to these businesses if the right turn lane is moved to the driveway past the Pickens Bank site and direct access to SR 53 is removed from the McDonald's and pizza restaurants. The Right-of-Way Agent is currently evaluating and will be able to provide an estimated dollar value associated with these two parcels assuming the relocation of the right turn lane during the week of May 26, 2008.

CH2M HILL has evaluated the roadway costs associated with the option to shift the Ingles driveway entrance to the east of the existing driveway location and begin the right turn lane just past the McDonald's. The roadway costs for this option are approximately \$70,000, including some associated excavation. As noted in the Responses to Value Engineering Study dated April 9, 2008, this option would require further investigation during the preliminary design to evaluate the drainage, geotechnical, etc. There would be additional costs that would have to be incurred for the geotechnical portion.

The design team does not recommend the alternative VE recommendation, but would suggest further investigation during the preliminary design phase once Notice to Proceed is received. Once the geometry can be evaluated more extensively, other options such as a slight shift in the alignment towards the cemetery with a wall to stay off of the property may be an option. If the slight shift in alignment will allow us to reduce the impacts at the McDonald's and pizza restaurant it may be possible to save some of the parking in front of the restaurants with the use of walls. This will have to be evaluated after the preliminary design is underway. Another option would be to also consider reduction of the median width in the area of the McDonald's and pizza restaurant.

If you need any additional information, please call me at 404-463-0291.

Thanks,
Steve

Help GDOT serve you better. Visit <http://www.howmyservice.dot.ga.gov> and rate the service you received from Team GDOT.

Wishon, Ron

From: Adewale, Steve (Adesoji)
Sent: Tuesday, May 20, 2008 9:01 AM
To: Wishon, Ron
Cc: Hill, Stanley
Attachments: Summit st and Bryant Street DHV.JPG

Please find below the additional information related to VE recommendation RD-7 to substantiate the Design Team submission on the recommendation by the VE CONSULTANT. Also, attached is the traffic diagram at Bryant Street. You will get the additional information requested regarding the options near the McDonald's (RD-23) shortly.

RD-7 Delete west bound left (u-turn) at Bryant Street; delete wb left turn lane and eyebrow

Response: Deleting the proposed left turn lane westbound on SR 53 Business is a possibility for this project. It can be expected that potential left turning vehicles on SR 53 Business will use the proposed median break and eyebrow located approximately 800 feet to the east of Bryant Street at the Gordon Road intersection. If the u-turn lane is deleted, traffic exiting from Summit Street to go eastbound on SR 53 Business would be required to turn right and travel approximately 1700' to a median break and then perform a u-turn to go east on SR 53 Business. At this intersection (Gordon Road @ S.R. 53 Business), the proposed design will operate as a two way stop condition, requiring any u-turning vehicles to perform the maneuver under free flow conditions for eastbound traffic.

The proposed concept currently provides a u-turn lane and eyebrow pad at the Bryant Street intersection with S.R. 53 Business. This intersection is proposed to operate with a stop and go signal without a protected u-turn signal phase. The estimated u-turn traffic for this movement (westbound S.R. 53 Business traffic making a u-turn to go eastbound on S.R. 53 Business) will not satisfy the required warrants for a separate u-turn signal phase. However, minimal modifications to the proposed stop and go signal (to the signal head configuration and traffic phasing but not to the actual roadway footprint) would be required to create a protected u-turn phase if warranted by a change in traffic conditions.

Considering each of these possibilities and the cost savings of removing the u-turn lane, Design Team recommends leaving the westbound u-turn lane and eyebrow in the proposed design at the intersection of S.R. 53 Business and Bryant Street.

Thanks,

Steve

